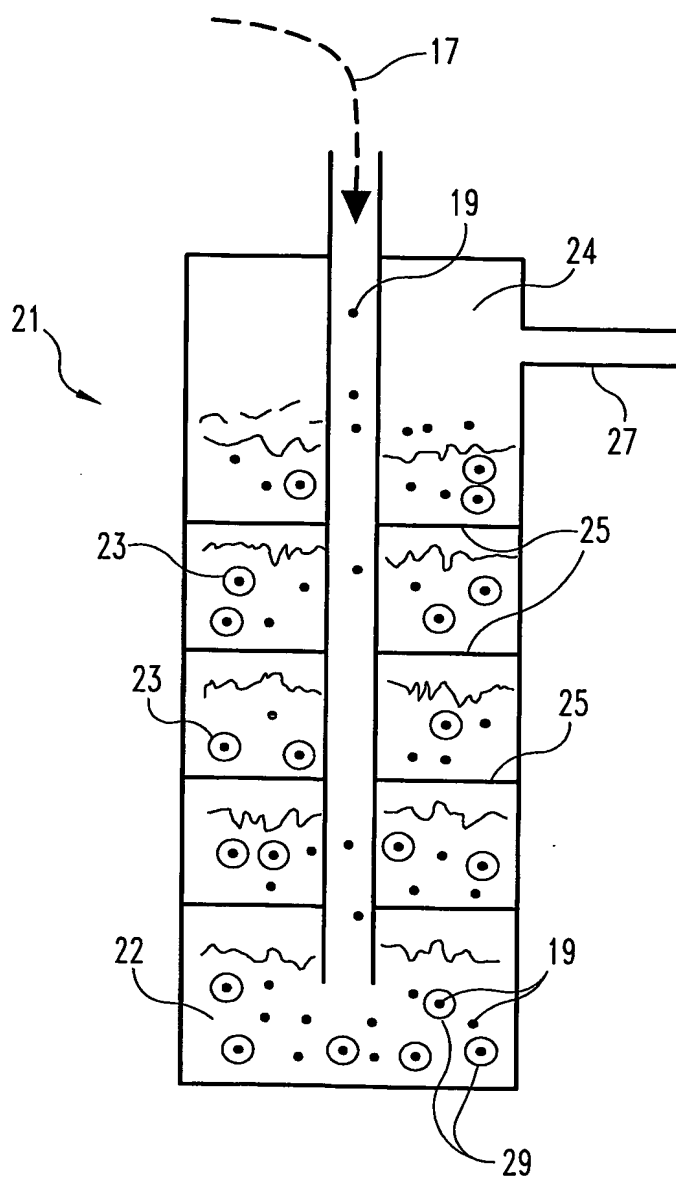
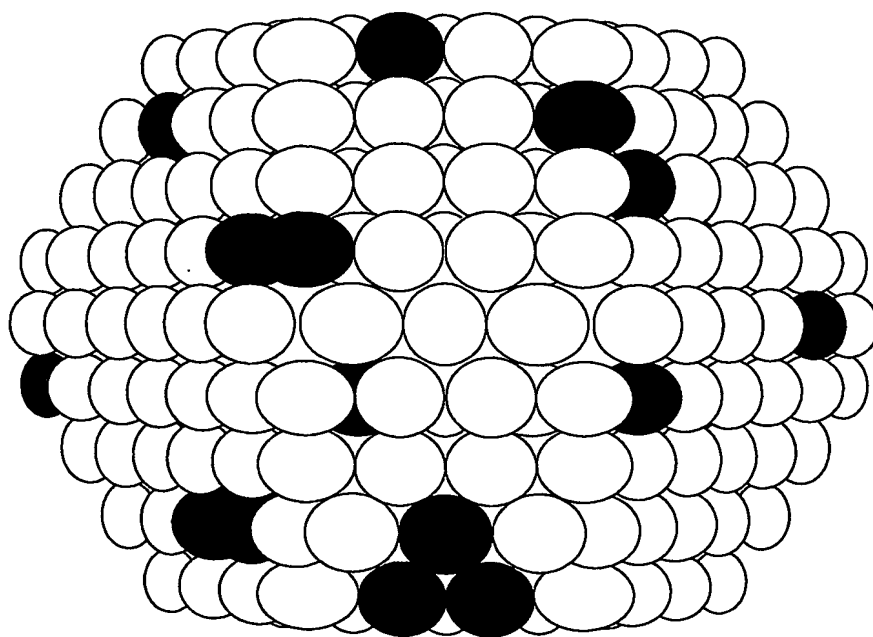
**Fig. 1**

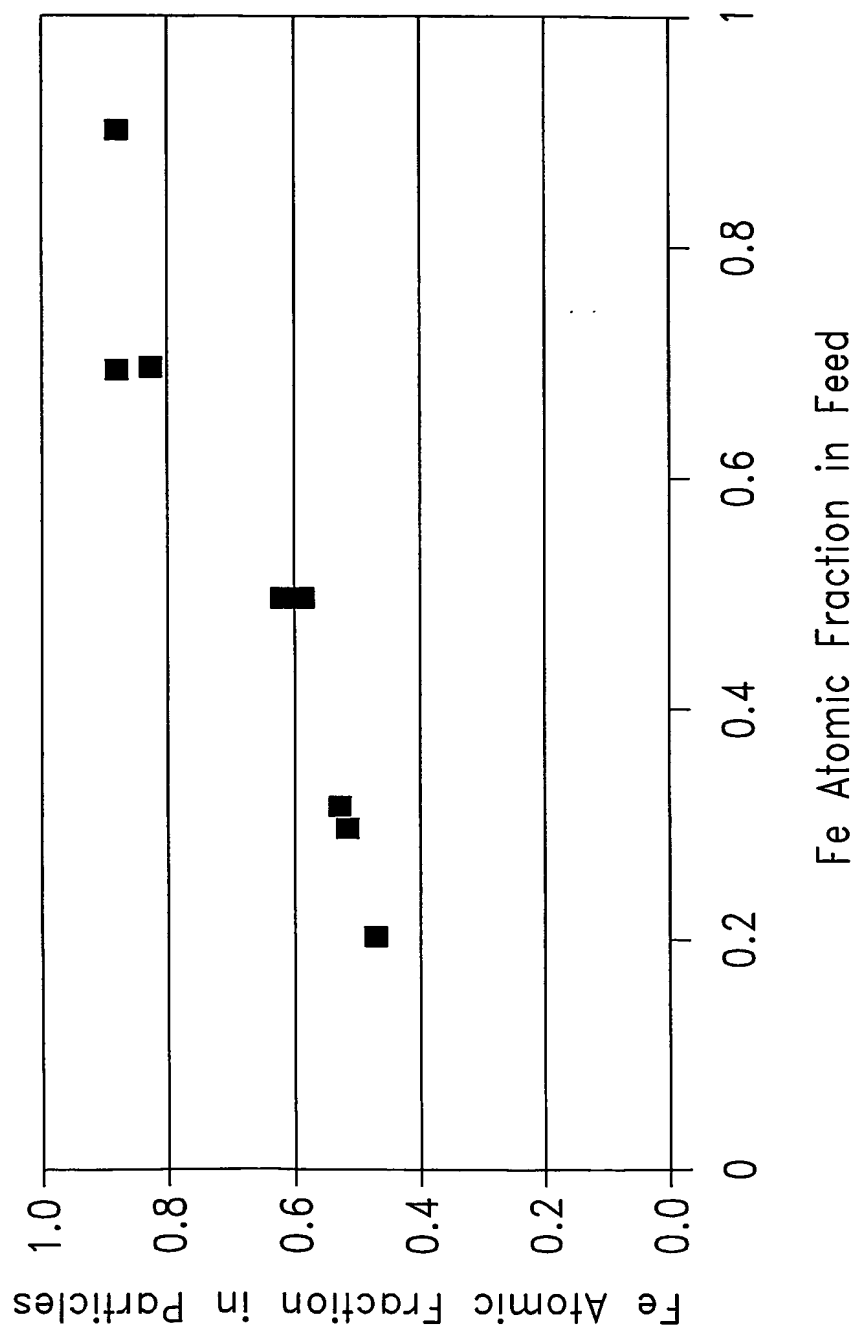
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**Fig. 2**



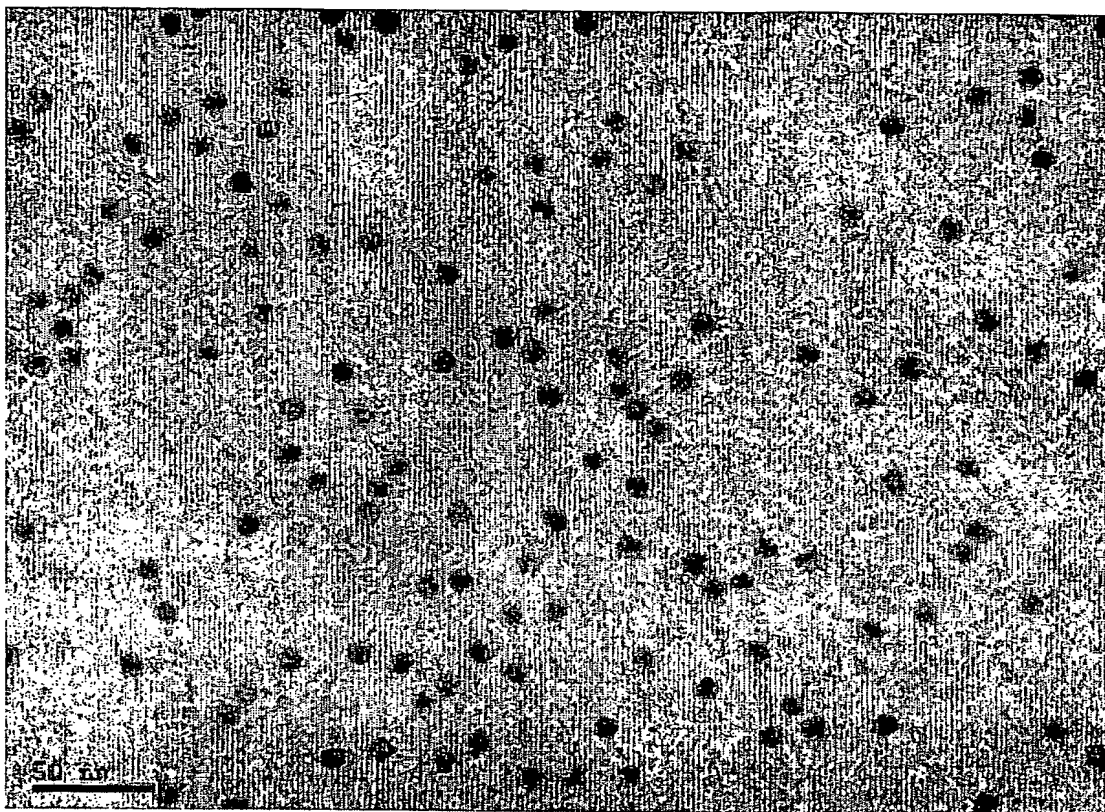
***Fig. 3***

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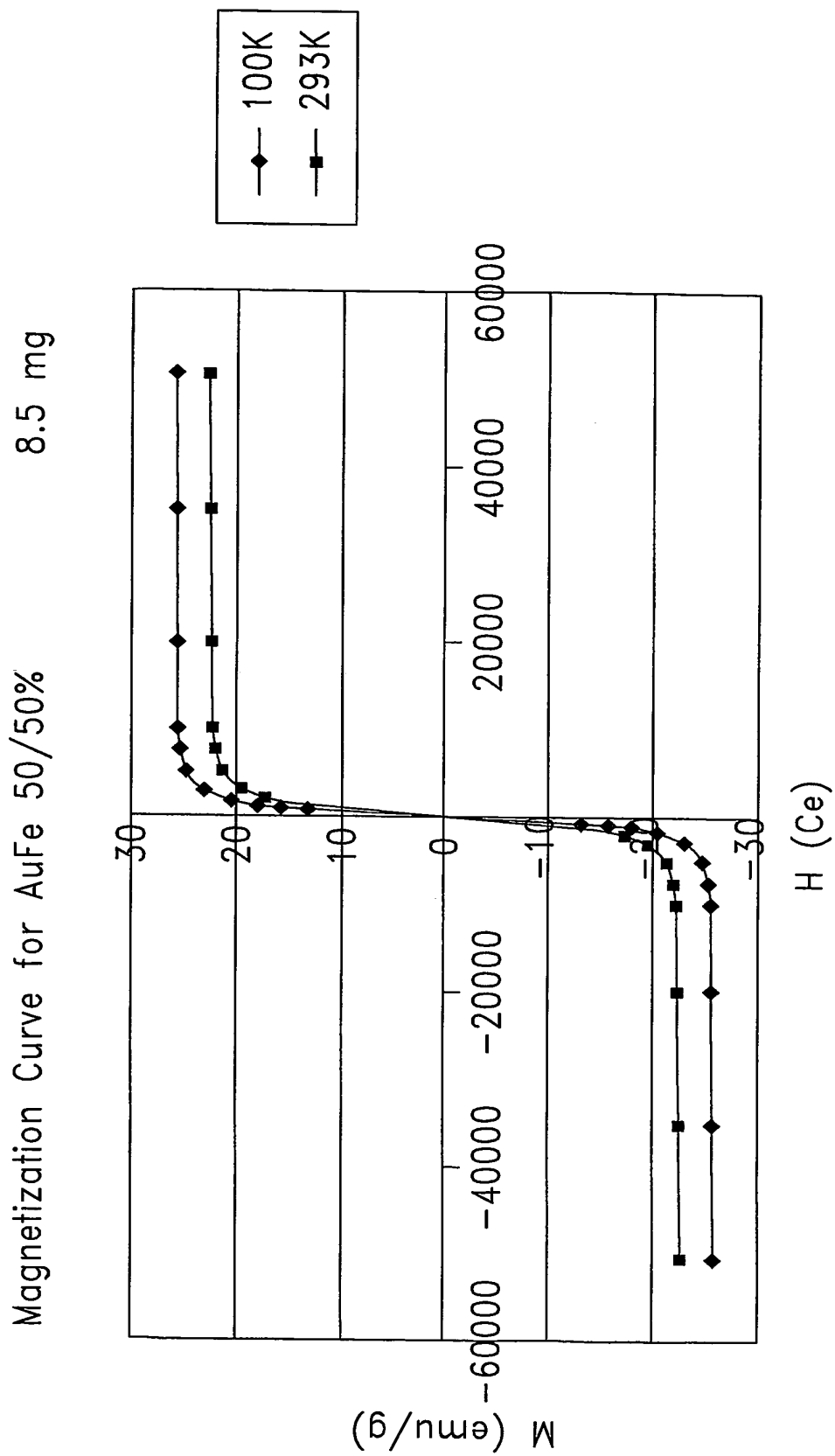


**Fig. 4**

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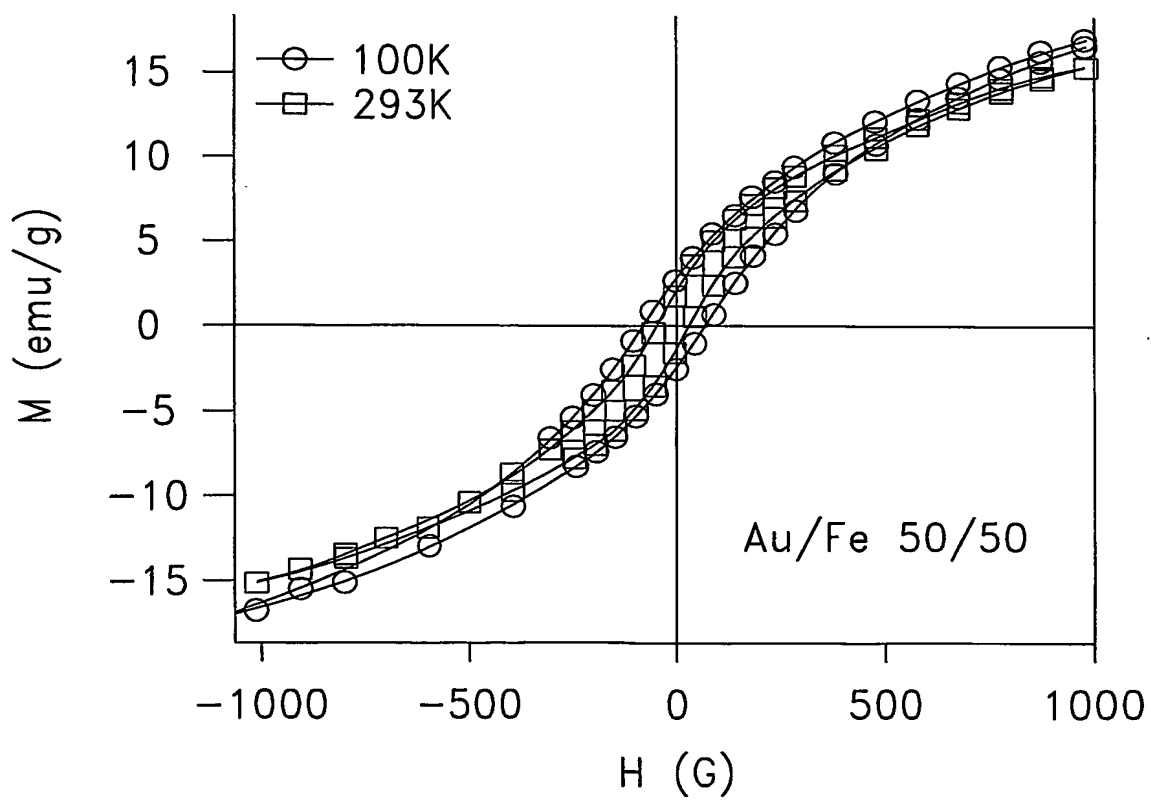


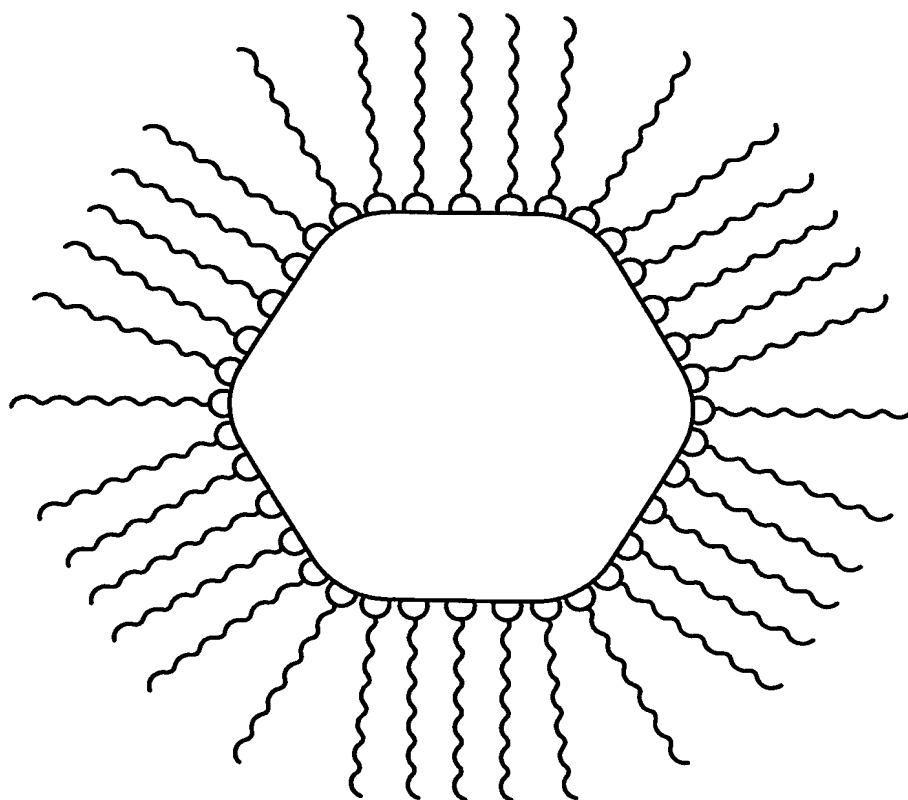
*Fig. 5*



**Fig. 6a**

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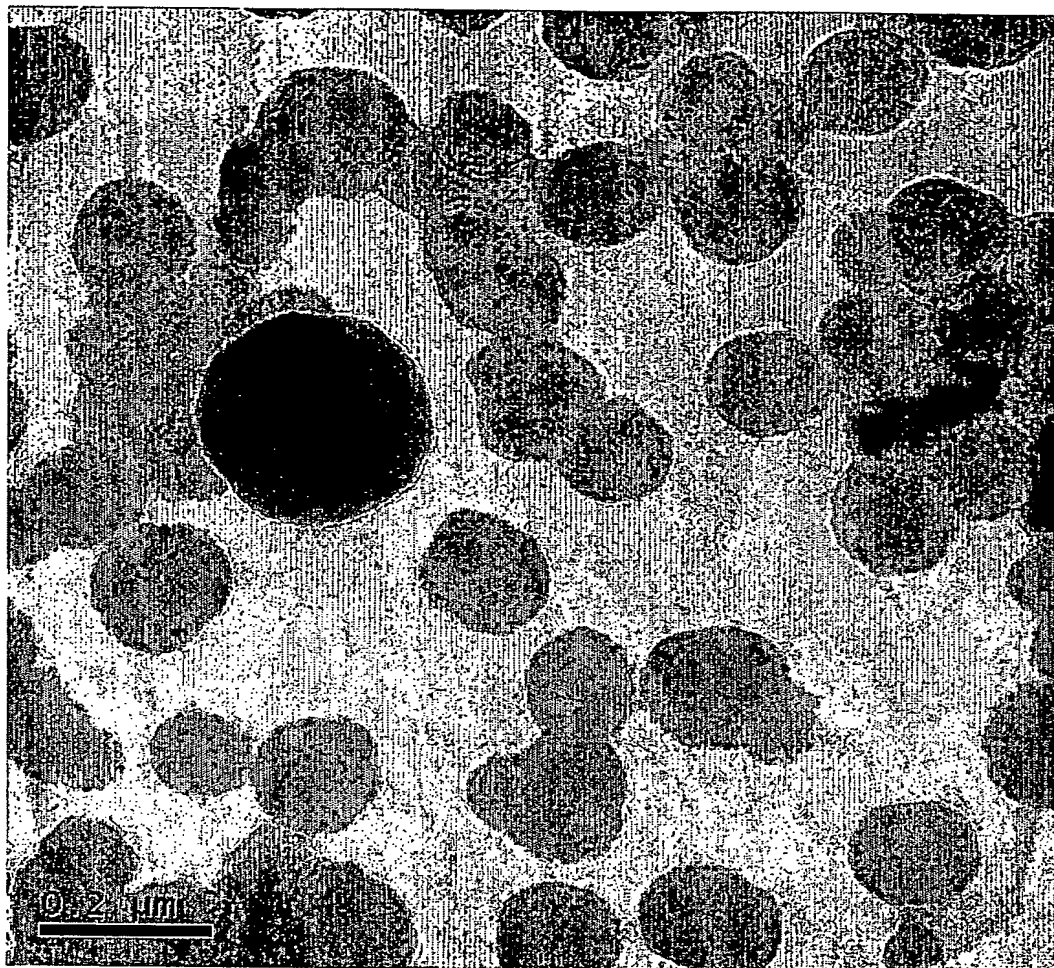
**Fig. 6b**



***Fig. 7***



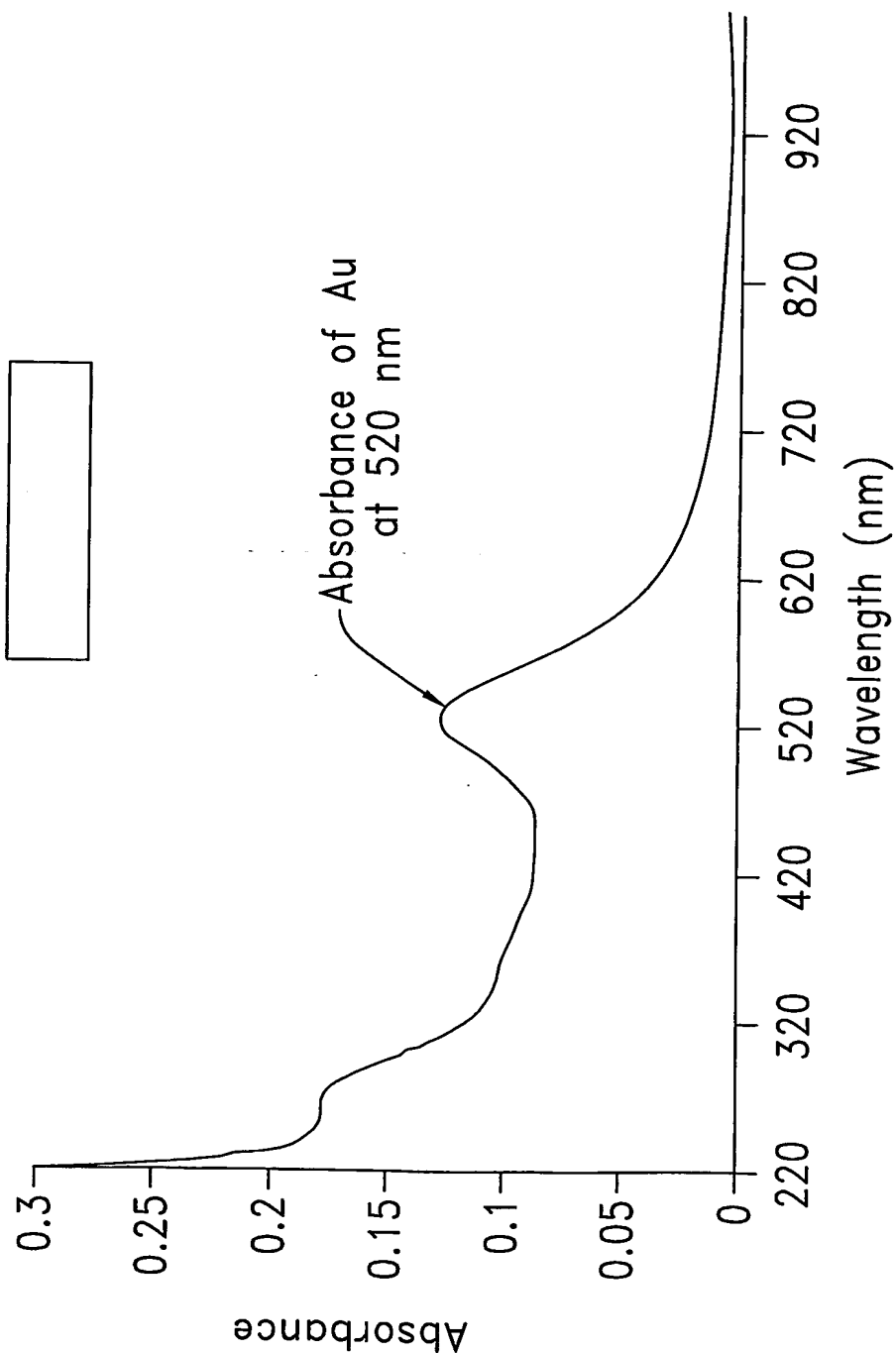
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*Fig. 8*

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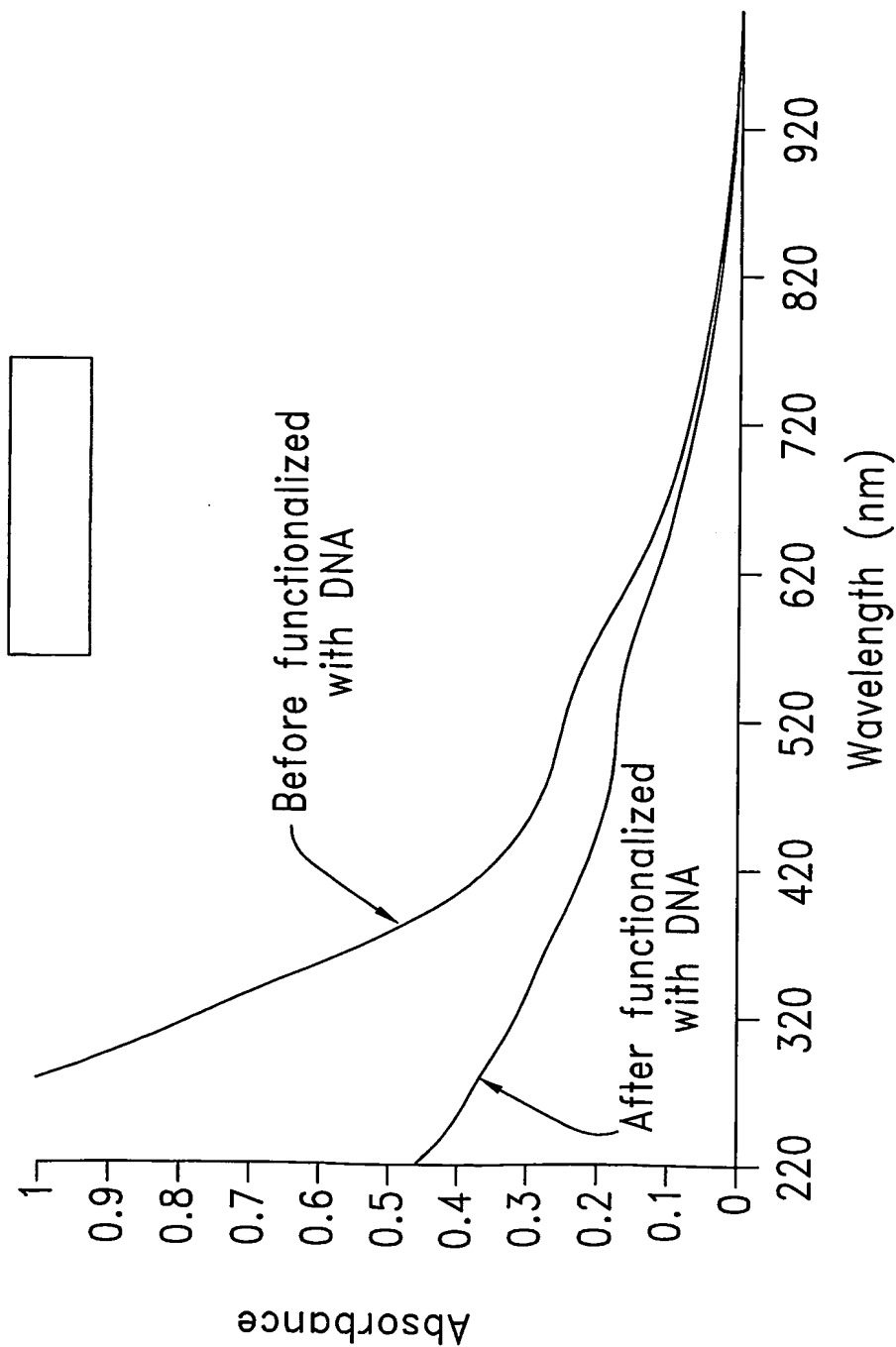
# UV-Vis Spectrum of DNA Functionalized Au Nanoparticles



**Fig. 9**

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# UV-Vis Spectra of Fe/Au Nanoparticles

**Fig. 10**

# Experimental DNA Hybridization of Functionalized Nanoparticles

WO 2004/003508

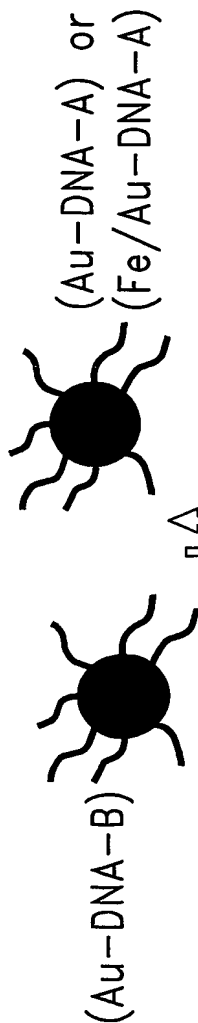
PCT/US2003/020226

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DNA-A: 5'HS-GTC AGT CCG  
TCA GTC-3'

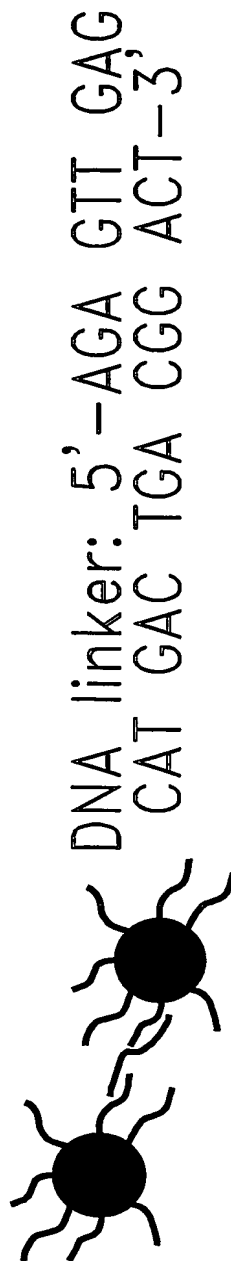
DNA-B: 5'ATG CTC AAC  
TCT CCG-SH 3'

Step 1:  
Functionalization



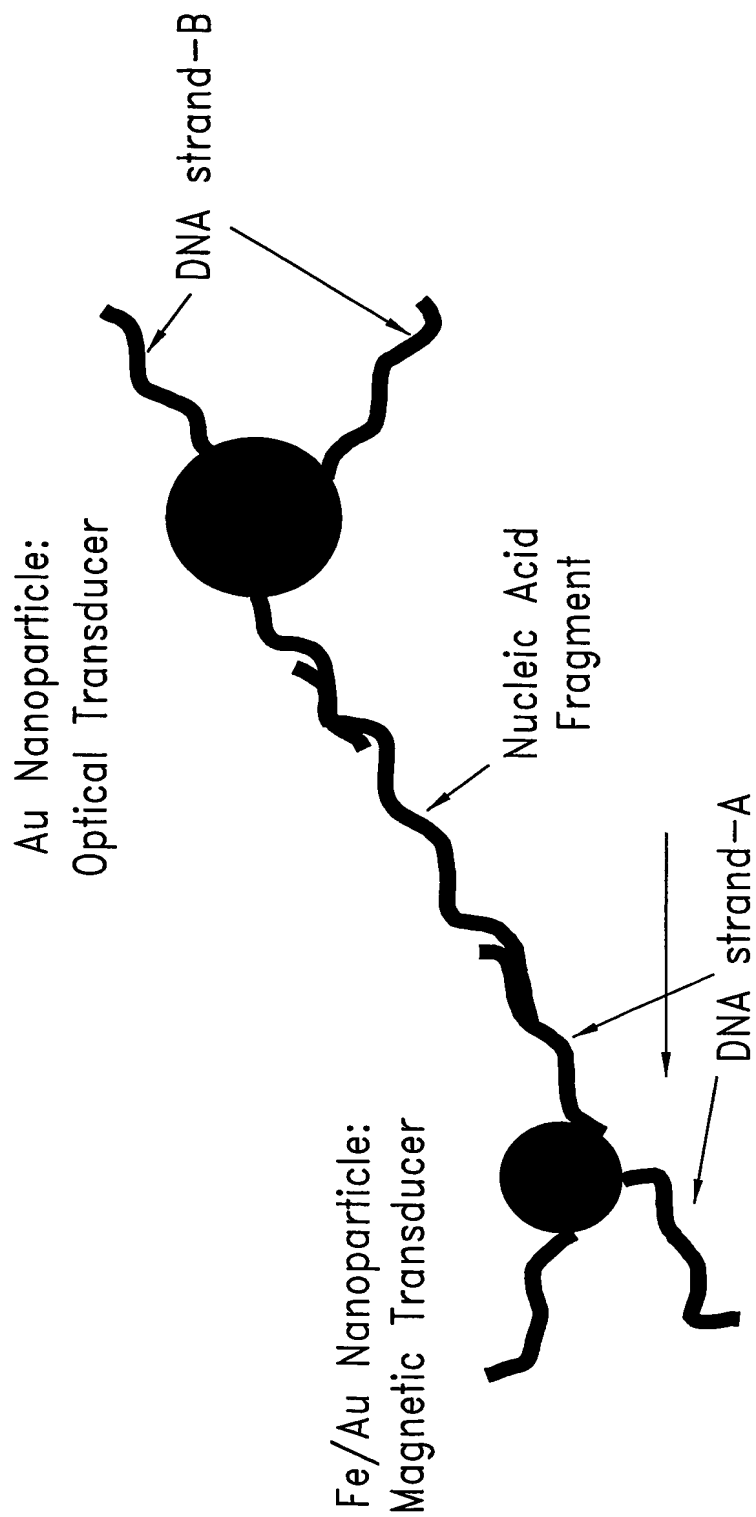
Step 2:  
Hybridization

(DNA-linker/  
Target DNA)

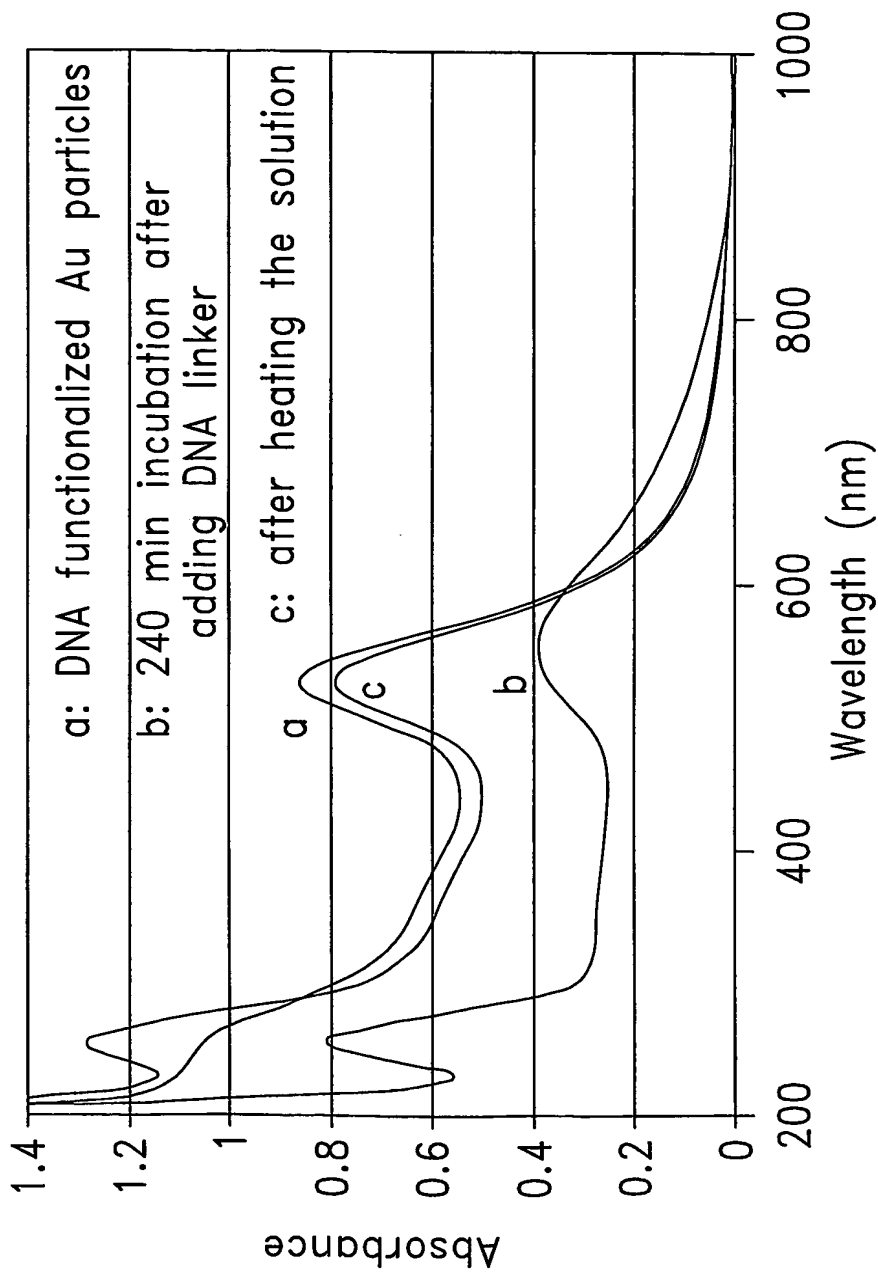


**Fig. 11a**

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**Fig. 11b**

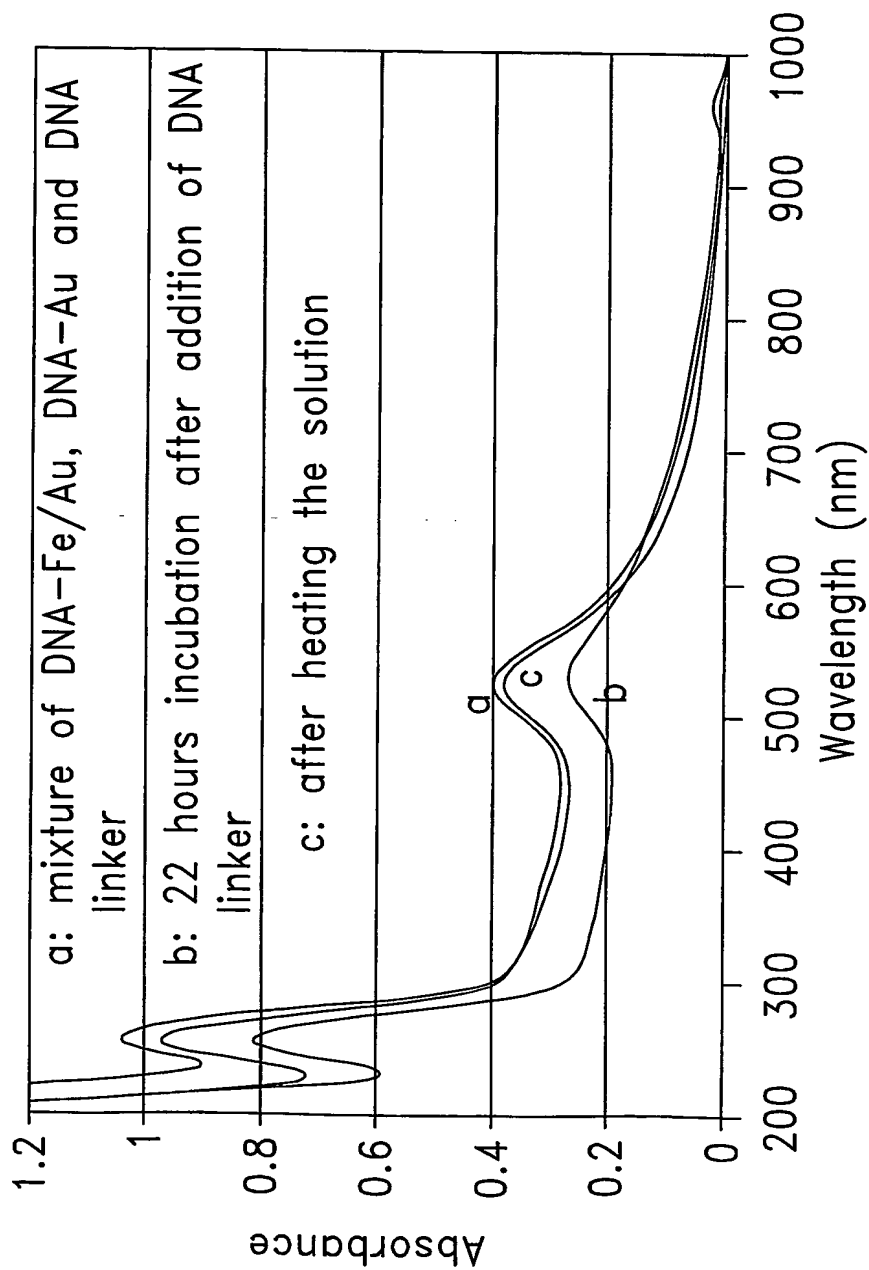
UV-Vis Spectra of Hybridized  
Au:DNA:Au Complexes



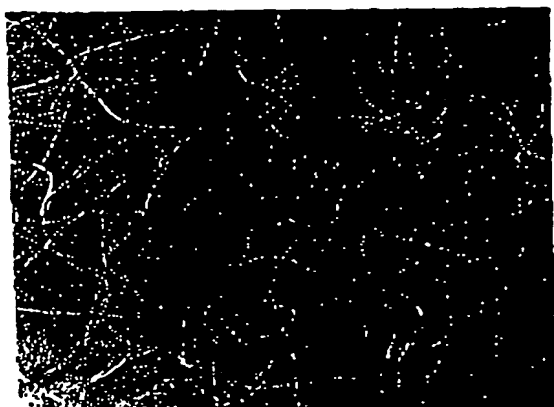
**Fig. 12a**

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# UV-Vis Spectra of Hybridized Fe/Au:DNA:Au Complexes

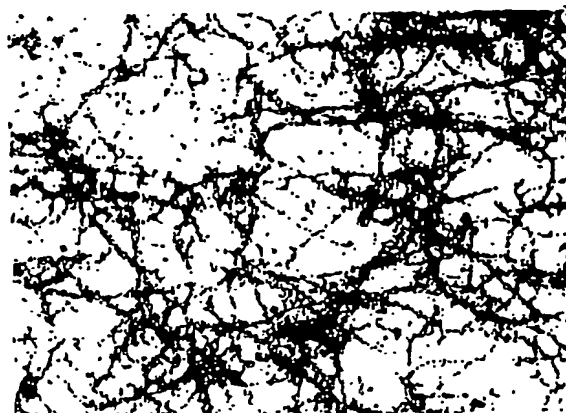
**Fig. 12b**

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A. Phage only

FIG. 13A



B. Phage + anti M13/Au particles

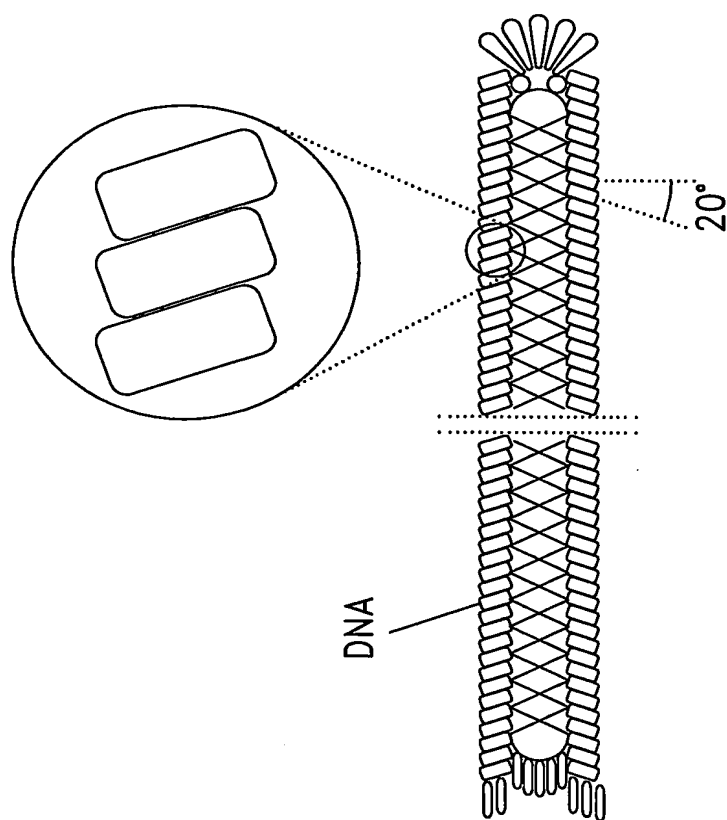
FIG. 13B



FIG. 13C

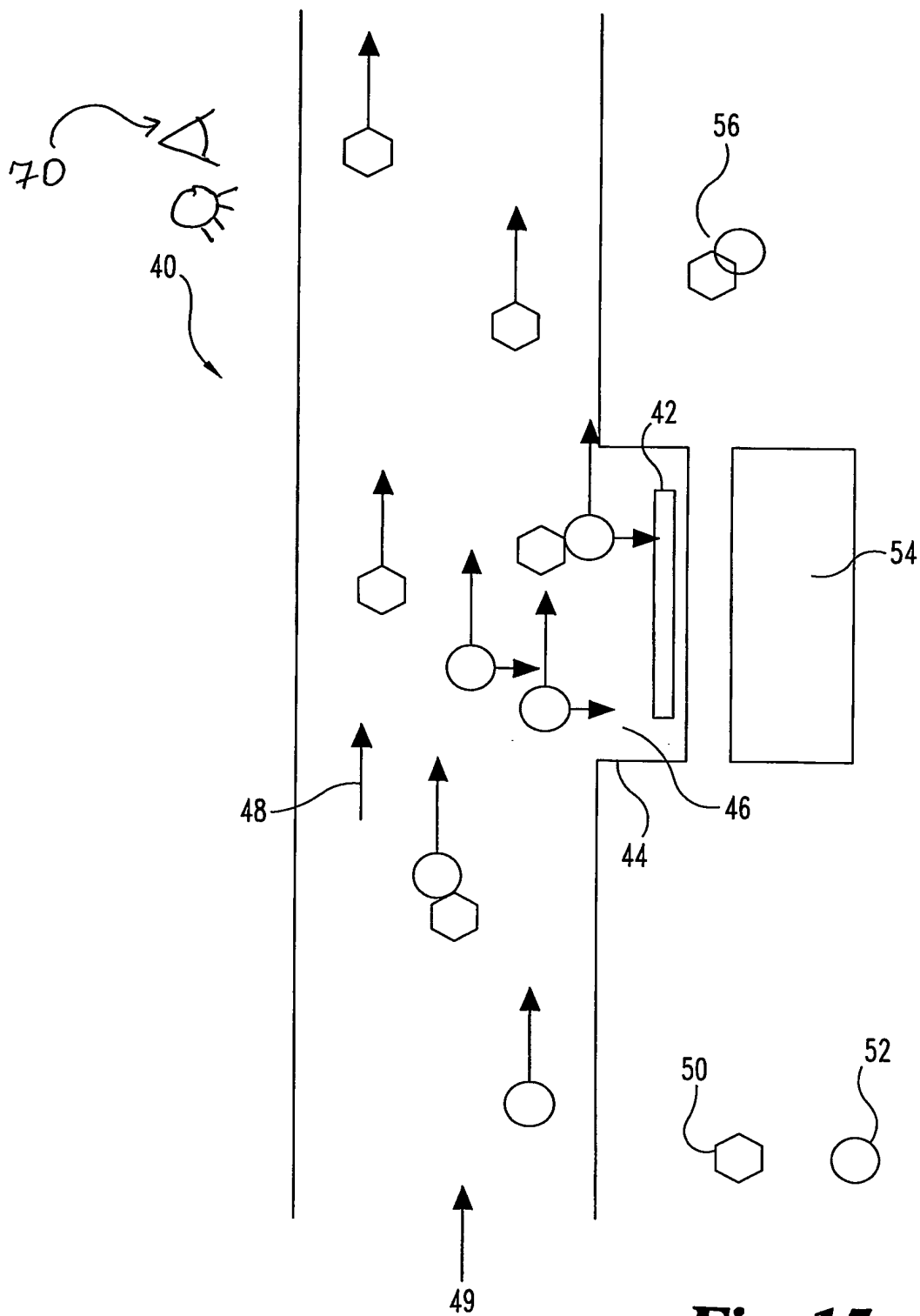


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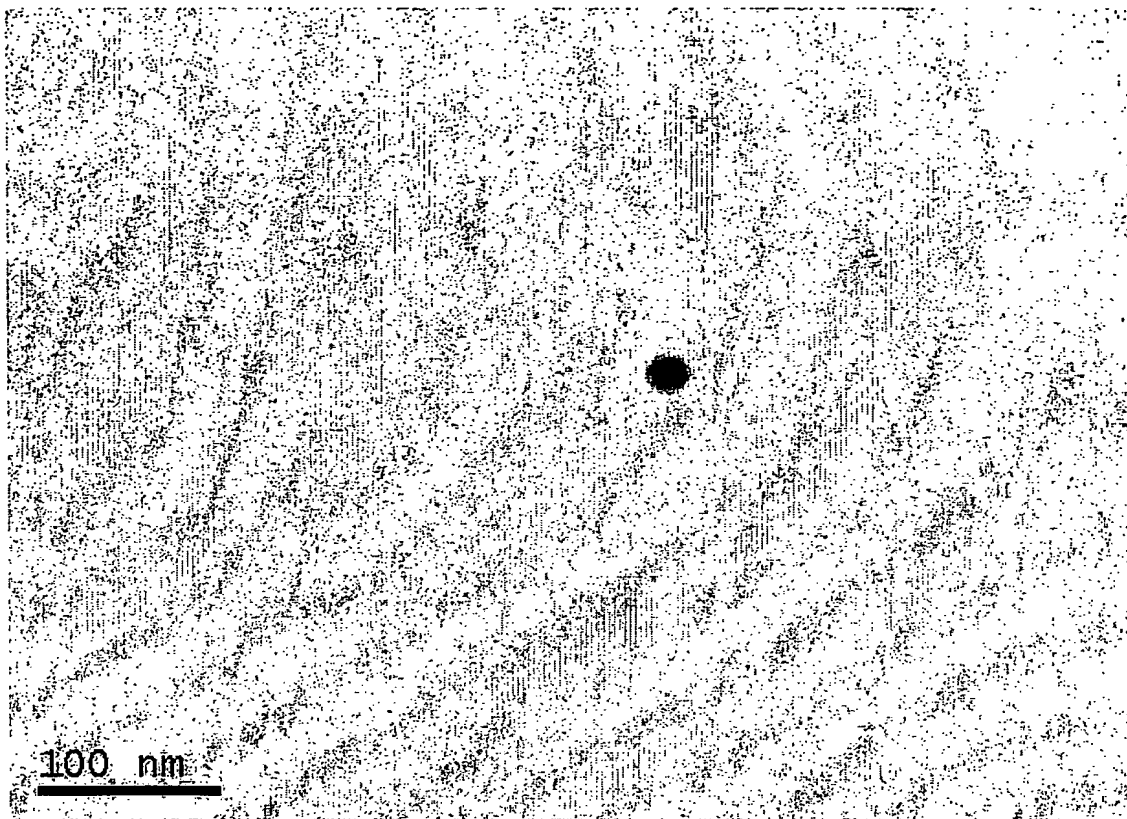
- Anti-M13 conjugated Fe/Au particles (specific, 1:1 ratio)
- Anti-M13 monoclonal conjugated Au particles (attached in the body)

**Fig. 14**

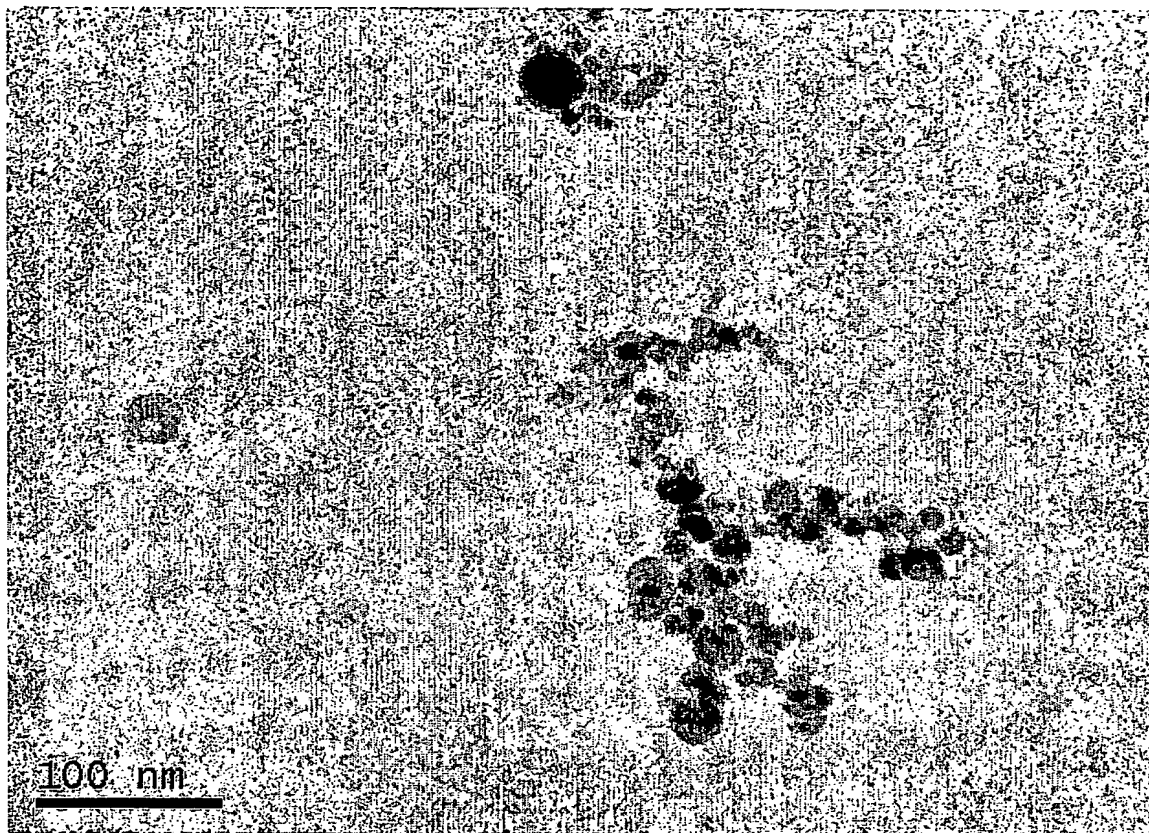


**Fig. 15**

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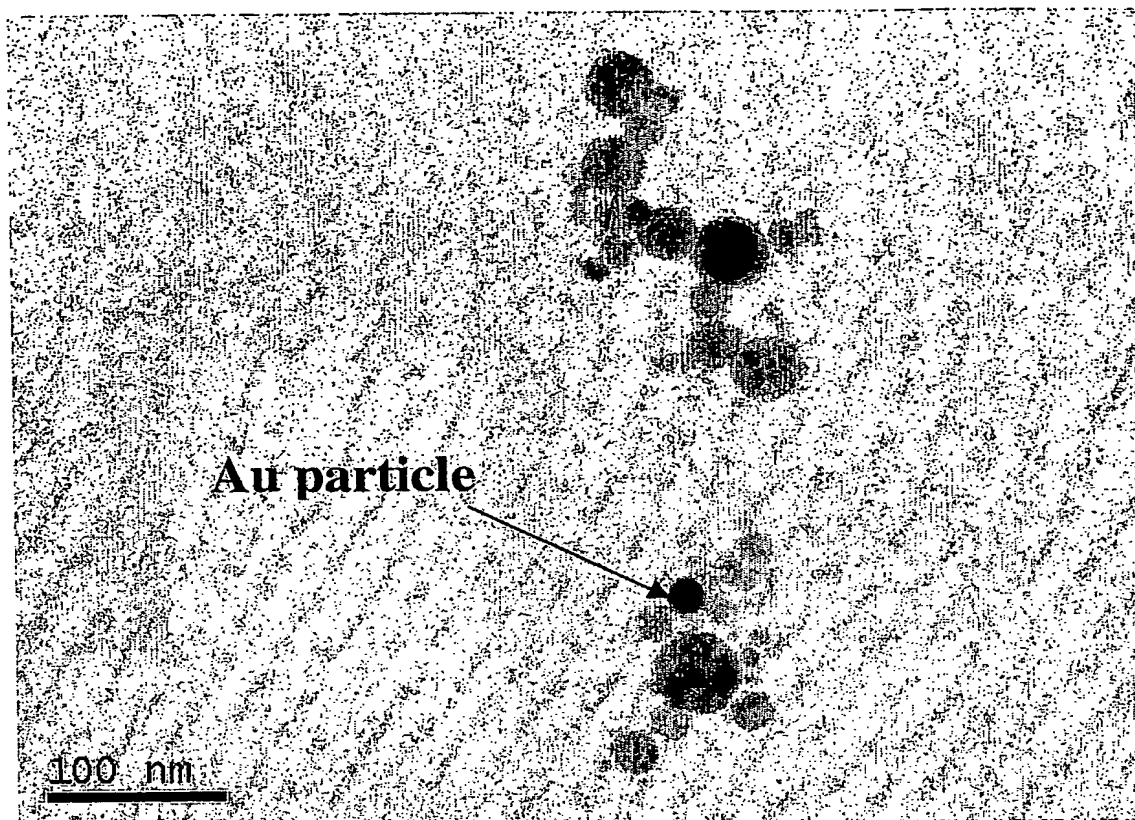


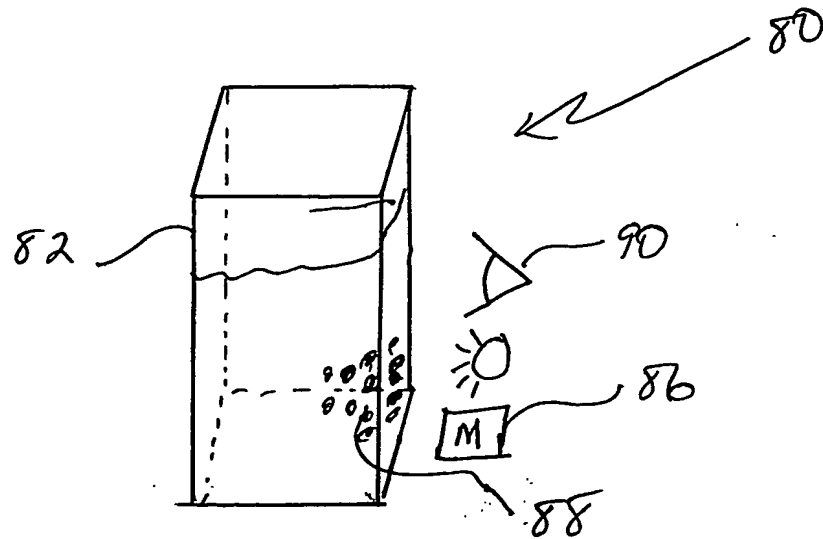
***Fig. 16***



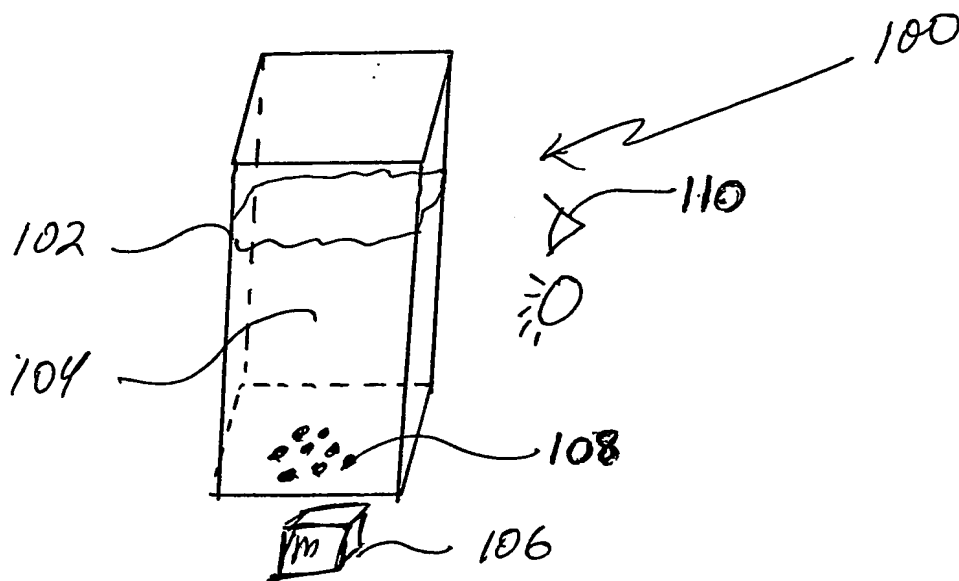
***Fig. 17***

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***Fig. 18***



**Fig. 19**



**Fig. 20**